



US005812758A

**United States Patent** [19]  
**Laureanno**

[11] **Patent Number:** 5,812,758  
[45] **Date of Patent:** Sep. 22, 1998

[54] **SYSTEM LEVEL AID FOR TROUBLESHOOTING (SLAT)**

[75] Inventor: Thomas Laureanno, Tiverton, R.I.

[73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.

[21] Appl. No.: 570,466

[22] Filed: Nov. 9, 1995

[51] Int. Cl. 6 ..... G06F 11/00

[52] U.S. Cl. ..... 395/183.22; 395/185.1; 395/183.01; 364/DIG. 1

[58] Field of Search ..... 395/183.22, 183.02, 395/182.08, 183.01, 185.1, 916, 182.13, 326, 352; 364/DIG. 1, DIG. 2

[56] **References Cited**

U.S. PATENT DOCUMENTS

5,127,006 6/1992 Subramanian et al. ..... 395/183.11

5,237,677 8/1993 Hiroswa et al. ..... 395/575  
5,309,448 5/1994 Bouloutas et al. ..... 371/29.1  
5,363,366 11/1994 Wisdom, Jr. et al. ..... 370/13  
5,528,748 6/1996 Wallace ..... 395/183.01

*Primary Examiner*—Robert W. Beausoleil, Jr.

*Assistant Examiner*—Dieu-Minh Le

*Attorney, Agent, or Firm*—Michael J. McGowan; Prithvi C. Lall; Michael F. Oglo

[57] **ABSTRACT**

This invention relates generally to a method and apparatus for isolating and analyzing faults in a complex system which is represented by a network comprising a plurality of nodes interconnected by links defining the flow among nodes corresponding to flows in the complex system. The complex system is stored as a database internal to the apparatus and represents a physical system under test. The apparatus localizes faults in the system by utilizing data structure search methods invoked by the operator successively passing and/or failing system nodes based on observed system status and technical information provided by the apparatus.

19 Claims, 4 Drawing Sheets

